

CLAIMS

What is claimed is:

1. A surgical device, comprising:
 - a) an ergonomic handle having a finger actuator configured to receive a single
5 finger of a user;
 - b) an elongated tubular portion extending from the ergonomic handle and
having a longitudinal axis, the finger actuator being positioned substantially in line
with the longitudinal axis of the tubular portion; and
 - c) a rod functionally disposed within the tubular portion along the longitudinal
10 axis, the rod being coupled proximally to the finger actuator and configured to be
coupled distally to a functional end.
2. A surgical device as in claim 1, further comprising a functional end coupled to a
distal end of the rod, such that bidirectional pressure applied by the single finger to the
15 finger actuator along the longitudinal axis manipulates the functional end in a bidirectional
manner in a common direction to the bidirectional pressure.
3. A surgical device as in claim 2, further comprising a ratcheting mechanism to lock
the finger actuator in a fixed position, thus locking the functional end in a fixed position.
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4. A surgical device as in claim 2, wherein the functional end is free to rotate around
the longitudinal axis.
5. A surgical device as in claim 1, wherein the elongated tubular portion is detachable
25 from the ergonomic handle.
6. A surgical device as in claim 1, wherein the ergonomic handle has a shape of a
pistol grip.
- 30 7. A surgical device as in claim 6, wherein a portion of the pistol grip that is
substantially out of line with the longitudinal axis can be manipulated into a position that
is substantially in line with the longitudinal axis.

8. A surgical device as in claim 6, wherein a portion of the pistol grip that is substantially out of line with the longitudinal axis is detachable.

9. A surgical device as in claim 2, wherein the functional end is selected from the group consisting of a grasper, scissors, a blade, a laser and a needle holder.

10. A surgical device as in claim 2, wherein the functional end is a grasper.

11. A surgical device as in claim 2, wherein the functional end is scissors.

12. A surgical system operated by a single finger, comprising:

a) an ergonomic handle having a finger actuator configured to receive a single finger of a user;

b) an elongated tubular portion extending from the ergonomic handle and having a longitudinal axis, the finger actuator being positioned substantially in line with the longitudinal axis of the tubular portion; and

c) a rod functionally disposed within the tubular portion along the longitudinal axis, the rod being coupled proximally to the finger actuator and coupled distally to a functional end, such that bidirectional pressure applied by the single finger to the finger actuator along the longitudinal axis manipulates the functional end in a bidirectional manner in a common direction to the bidirectional pressure.

13. A surgical system as in claim 12, further comprising a ratcheting mechanism to lock the finger actuator in a fixed position, thus locking the functional end in a fixed position.

14. A surgical system as in claim 12, wherein the functional end is free to rotate around the longitudinal axis.

15. A surgical system as in claim 12, wherein the elongated tubular portion is detachable from the ergonomic handle.

16. A surgical system as in claim 12, wherein the functional end is selected from the group consisting of a grasper, scissors, a blade, a laser and a needle holder.

17. A surgical system as in claim 12, wherein the functional end is a grasper.

18. A surgical system as in claim 12, wherein the functional end is scissors.

19. A method of manipulating a surgical instrument with a single finger, comprising the following steps:

- a) grasping the surgical instrument with a hand of a user;
- b) inserting the single finger of the user into a finger actuator of the surgical instrument;
- c) moving the single finger in a direction away from the hand, causing operation of a functional end; and
- d) moving the single finger in a direction toward the hand, causing operation of the functional end.

20. A method of manipulating a surgical instrument with a single finger as in claim 19, further comprising the step of rotating the functional end with the single finger.